Environmental Resources Management

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10 December 2015

Ms. L. Alexandra Liverman
Oregon Department of Environmental Quality
Northwest Region
700 NE Multnomah Street, Suite 600
Portland, OR 97232

Subject: Univar USA Inc.
3950 NW Yeon Avenue, Portland, Oregon
Responses to ODEQ Comments
Draft Stormwater Source Control Evaluation Work Plan
Dated October 2015

Dear Ms. Liverman:

This letter provides responses to comments received from the Oregon Department of Environmental Quality (ODEQ) on 10 November 2015 related to the Draft Stormwater Source Control Evaluation Work Plan (Draft SW SCE Work Plan) dated October 2015. The Draft SW SCE Work Plan was submitted by ERM-West, Inc. (ERM) on behalf of Univar USA Inc. (Univar) to document the proposed plans and procedures for sampling catch basin solids and stormwater at the Univar property located at 3950 NW Yeon Avenue in Portland, Oregon (the "Property"). The stormwater source control evaluation is being conducted in accordance with the Letter Agreement for Source Control Evaluation between Univar and the ODEQ dated 24 July 2015 (letter agreement).

Each of the ODEQ comments is provided below in italic font, followed by the Univar response which is reflected in the revised Stormwater Source Control Evaluation Work Plan.

General Comments

Thank you for your submittal of the draft work plan for evaluating the stormwater pathway, including the potential for groundwater infiltrating the storm lines, at the site. DEQ reviewed the plan and also solicited comments from the City of Portland, since site stormwater discharges to the City outfall basin 18 conveyance system. DEQ's comments to improve the work plan are offered below

and include integration or reference to City comments that DEQ agrees should be addressed in a revised submittal. The full comment set offered by the City is also attached for your further consideration. DEQ requests that you prepare a revised work plan submittal that addresses pertinent comments.

In accordance with the general comment, responses are provided below for ODEQ and pertinent City of Portland comments described within the ODEQ comments received on 10 November 2015. A revised SW SCE Work Plan that incorporates the revisions presented below will be submitted under separate cover.

Specific Comments

1. *Section 2.3.3 – The last paragraph of this section indicates that approximately 12 inches of accumulated sediment in the City 42-inch line at the sag where removed. Please provide any available information on volume and characterization of this removed material, either for source control purposes or for disposal, and consider it in the source control evaluation.*

Section 2.3.3 will be revised to provide available information on volume and characterization of the material removed in 2010 from the City-owned 42-inch line. Available characterization data for this material was considered in the selection of catch basin solids and stormwater monitoring parameters for the screening evaluation. However, Univar notes that the accumulated solids in the City-owned 42-inch line is not representative of solids or stormwater discharges from the Univar property because numerous upstream industrial facilities and other businesses discharge stormwater, solids, and likely groundwater to this line. In fact, stormwater contributions from Univar are a minority component of the total stormwater conveyed through the 42-inch line..

2. *Section 2.4 - Please expand the sub-basin drainage area description to include site drainage basin 5 discharging to the City's west-central subbasin, as described in City comment #12.*

Section 2.4 will be revised to note that drainage basin 5 discharges to the west-central subbasin.

3. *Section 2.4.1 and Figures 3 and 4 – Please resolve discrepancies between the text and figures as described in City comment #13.*

The figures and text in Section 2.4.1 will be revised to address inconsistencies noted in City comment #13. The "city special connections" will be removed from the figures. These items are related to abandoned historical residential sanitary sewer connections and not relevant to the SW SCE.

4. *Section 2.4.2.1 – The paragraphs summarizing source control status at adjacent sites mischaracterizes information presented in DEQ's Portland Harbor Upland Source Control Summary Report. As written, the summaries imply that DEQ changed the priority for source control of sites based on implementation of source control actions completed at sites. In actuality, priorities were assigned relative to known information at the outset of DEQ's source control work, in order to help DEQ plan workload and ensure that the sites with the most threat of contaminant migration to the river were addressed in a timely fashion. The tables summarizing site activities in DEQ's Summary Report include a column that indicates DEQ's qualitative assessment of each site's potential for sediment recontamination following implementation of EPA's in-water cleanup. This ranking of potential for sediment recontamination can change, relative to implementation of effective source control actions at each site. Please revise the write-up of source control status at adjacent sites to reflect this nuance.*

The text in section 2.4.2.1 will be revised to reflect the current status of source control priorities and clarify that these rankings may change based on the implementation and effectiveness of the source control actions at each site.

5. *Section 2.4.3.7 – As noted in Section 2.3.2, historical NPDES 1200Z Industrial Stormwater general permit monitoring data includes concentrations of copper, lead, zinc and total suspended solids that are very elevated, with regard to Portland Harbor screening level values and DEQ's rank-order curves of data collected at heavy industrial sites within the Portland Harbor study area uplands. These metals and other contaminants of interest at the site, are often associated with solids, such that a focus on reducing accumulation of solids in the stormwater system is often an effective source control measure.*

a. *It is unclear if regular site sweeping is accomplished at the site, which DEQ recommends as an effective solids accumulation reduction practice. Please clarify if biannual "ground sweeps" in "industrial active areas" refers to a visual inspection or a sweeping program. If sweeping, please provide information on extent of areas addressed, equipment used and actual frequency by which sweeping has occurred over recent years.*
b. *Regular catch basin cleaning is included as a current practice. If available, please provide information on frequency and volumes and character of material removed or begin logging this information through regular operations such that it can be used to determine effectiveness of source control actions.*

The text in Section 2.4.3.7 will be revised to clarify that the site sweeping and catch basin cleaning are regularly scheduled activities as part of the current site storm water management program. Details on the locations and frequencies will be provided in the revised SW SCE Work Plan.

6. *Section 3.4 – At least initially, the list of contaminants investigated at the site should also include those found elevated in the sediment area of potential concern where site stormwater discharges to the river. Site discharges enter the river through City outfall 18, which discharges to AOPC 19, which has elevated concentrations of: aluminum, barium, cadmium, copper, iron, manganese, mercury, silver, zinc, bis(2-ethylhexyl)phthalate, PCBs, PAHs, dioxins/furans, aldrin, delta-HCCH, dieldrin, endrin, DDx, chloroethane. This should be noted in the work plan and subsequent source control evaluation report and used as a line of evidence.*

Univar notes that observation of an "elevated" concentration of a given constituent in sediment near Outfall 18 does <u>not</u> necessarily indicate that a) the constituent originated from Outfall 18, b) the constituent is a source control driver, or c) that it originates from the Property.

Univar further notes that to date, as described in the Basin 18 Completion Report (ODEQ, December 2013), the City of Portland has focused its Outfall 18 source tracing activities on PCBs, pesticides, and metals. According to the Basin 18 Completion Report, this list of analytes was based on the City's evaluation of 2007 to 2008 stormwater and

stormwater solids trap sample data collected by the Lower Willamette Group in Basin 18 at a point representing discharge from Outfall 18.

With regard to requests for analysis of specific analytes:

- Cadmium, copper, manganese, mercury, zinc, bis(2-ethylhexyl)phthalate, PCBs, PAHs, aldrin, dieldrin, endrin, DDx, and chloroethane were already included as proposed analytes in the Draft SWSCE Work Plan.

- In accordance with the ODEQ request, pesticides will be added to the analytes list for the catch basin solids samples. Tables and text in Section 3.4 will be revised to detail the additional analysis for screening purposes. The results of catch basin solids screening will be used to guide decisions for potential additional stormwater sample analytes.

- Univar notes that, as documented in Table 2.2-2 of the Draft Final Feasibility Study for Portland Harbor, several of the requested analytes identified as risk drivers at AOPC 19 have been eliminated as COCs in Portland Harbor. These analytes include: aluminum, barium, iron, silver, and delta-Hexachlorocyclohexane (delta-HCCH). Aluminum, barium, silver and delta-HCCH were determined not to be ecologically-significant compounds and thus not retained as COCs. Iron was determined to be not a hazardous substance and not retained as a COC. Univar is not proposing to analyze catch basin solids or stormwater discharge samples for these compounds.

- With regard to the request to analyze samples for dioxin/furans, as discussed above, these constituents were not identified as constituents warranting source tracing based on the City's evaluation of existing stormwater and stormwater solids trap data (ODEQ, December 2013). In the absence of a comprehensive data set for Basin 18 for dioxins/furans, Univar's collection of such data would not inform source control decisions for this constituent group. For these reasons, Univar is not proposing to analyze catch basin solids or stormwater discharge samples for dioxins/furans.

7. *Tables 4, 5 & 6 – Please revise these tables to include the additional contaminants and clarifications requested below:*

    a. *Table 4 – The categories of contaminants are inconsistent with those in Tables 5 & 6. The SVOC category in Tables 5 & 6 includes subcategories of phthalate esters and PAHs, but in Table 4, PAHs are called out separately.*
        i. *DEQ suggests using all subcategory groups in Table 4.*
        ii. *Add organochlorine pesticides to Table 4.*
        iii. *Roof 1 & 2 should also include phthalates.*
    b. *Table 5 - Please include aluminum, barium, iron, silver and DDx.*
    c. *Table 6 – Please include aluminum, barium, iron, silver and TSS.*
    d. *Please specify analytical methods to be used by the laboratory that are better able to achieve method detection limits comparable to Portland Harbor screening level values, as indicated in City comment #8.*
    e. *Please instruct the laboratory to perform proper sample cleanup procedures, in the event of matrix interferences, before resorting to dilution of samples for analysis.*

The following edits and revisions will be made:

- Table 4 will be revised to be consistent with Tables 5 and 6. The PAH columns will be deleted from Table 4 and the superscript on the SVOC column revised to detail the SVOC subcategories proposed for analysis. Organochlorine pesticides will be added to Table 4. Phthalate analyses will be added to roof samples.
- Table 5 will be updated to include organochlorine pesticides.
- Table 6 will be updated to include TSS.
- Tables 5 and 6 will be updated to include analytical methods, method detection limits, method reporting limits, and Portland Harbor screening level values for the additional analytes.
- The laboratory is prepared to perform proper sample cleanup procedures, in the event of matrix interferences, before resorting to dilution of samples for analysis.

8. *Section 4.1 – DEQ appreciates the effort to select catch basins for sampling based on representativeness of operations and location within*

the drainage subbasins. Rather than selecting a different catch basin to sample, in the event that adequate sediment has not accumulated, please consider compositing available sediment from the selected catch basin with those radiating out from it within the same drainage subbasin.

The text in section 4.1 and section 5.1 will be revised to indicate the collection of a composite sample in the event that sample volume is insufficient at the proposed sample locations.

9. *Section 4.2 and Figure 5 – Please consider adding an additional sampling point in site drainage basin 2 and moving the point noted in site drainage basin 5, as described in City comment #15.*

Please note that there are only two loading dock drains (E-5 and E-6) which are located at the south end of the loading dock. Dock drains E-5 and E-6 drain surface depressions in the covered drum storage area which occasionally collect minimal rainwater during some rain events. The collected water is discharged to the paved surface through the SPCC valves E-5 and E-6.

SPCC control valves E-2 and E-3 are located on the north end of the loading dock are used for control of flow from catch basins (i.e., containing potential spills). These are valves that do not have sample collection access. There are no sampling locations proposed on the north end of the east loading dock as the activities conducted there are similar to the activities conducted in the sampling locations at the south end of the loading dock.

The SPCC valve in Drainage Basin 5 (W-3) is also a valve with no sampling access. The selected sampling locations (i.e. CB-5A) are the most representative accessible locations within each drainage basin.

10. *Section 4.3 – DEQ agrees with the City's comments #2, 3, and 4, which point out that the focus of the potential for contaminated groundwater to be preferentially transported in or along stormwater lines is too narrow. Please revise this section to include development and evaluation of additional information on: seasonal high groundwater elevations in relation to elevations of all piping that could preferentially transport groundwater (the 42-inch City line, site laterals, and the downgradient ODOT line); groundwater gradient and contaminant concentrations in*

the plume in relation to intersection with any of these lines; additional observations of potential dry-weather flow in yet unobserved lines with appropriate seasonal timing considerations; and additional seasonally relevant sampling at point(s), as warranted by the observations.

Per the letter agreement with ODEQ, it is Univar's intent to utilize the previous groundwater infiltration pathway investigation documented in the Draft SPI Report as a starting point for the evaluation of the potential for contaminated groundwater to be preferentially transported in or along stormwater lines. The data quality of the previous dry weather flow sampling is considered sufficient to be included in the characterization of the potential groundwater infiltration, and together with the additional groundwater infiltration sample proposed by Univar, will allow characterization of this pathway at the Site.

The extent of groundwater impacts has been delineated by the existing network of groundwater monitoring wells, as detailed in the most recent (May 2015) isoconcentration maps (ERM, 2015). The text in section 4.3 will be revised to include a description of the current extent of COCs in groundwater. Corrective measures which include hydraulic capture of groundwater are currently being implemented to address groundwater contamination onsite (ERM, 2015). Per the letter agreement with ODEQ, implementation of potential source control measures to address potential impacts of groundwater to the stormwater system identified during the SW SCE process will be implemented pursuant to the Amendment it Administrative Order on Consent to Implement Corrective Action (Resource and Recovery Act Docket No. 1087-10-18-3008 [h]) dated 1 August 2007.

Section 4.3 of the Draft SW SCE Work Plan will be revised to include the development and evaluation of additional information on the following:

- Seasonal high groundwater elevations in relation to elevations of piping that could preferentially transport groundwater , including the 42-inch City line and site laterals (where elevation data is available) and the downgradient ODOT line;
- Groundwater gradient and contaminant concentrations in the plume in relation to intersection with any of these lines; additional observations of potential dry-weather flow in yet unobserved lines with appropriate seasonal timing considerations; and

- Additional seasonally-relevant sampling at point(s), as warranted by the observations.

It is noted that only one additional location (STM-1) with the potential for dry weather flow is accessible for site specific sampling. The text will be revised to detail that the STM-1 location will be visually inspected for dry weather flow on a quarterly basis (3 events), and sampled if infiltrating groundwater is observed.

11. *Section 5.1 – DEQ agrees with City comment #16 that clarification on where catch basin solids are collected from is needed. For source tracing purposes, samples collected from above the filter are preferable and can include material collected from below the filter in the event adequate material for analysis is needed. For catch basin filter effectiveness, sample collection from material below the filter is preferable. DEQ recommends that initial samples be collected for source tracing purposes and that effectiveness sampling be conducted, as needed, following the investigation and subsequent implementation of any necessary source control measures.*

The catch basin solids sampling proposed consists of a single sampling event for screening purposes as described in the JSCS. The text in section 5.1 will be revised to indicate that samples will be collected from above the filter and will include material collected from below the filter in the event sufficient material volume for analysis is required.

Effectiveness of Best Management Practices (BMPs) and any potential source control measures will be measured by stormwater discharge samples which are considered more useful than catch basin samples for evaluation of effectiveness.

12. *Sections 7.1 and 8.0 – Please adjust the sampling procedures, schedule and phasing of tasks, as warranted, in light of the additional observations and seasonal considerations requested in DEQ comment 10 above.*

The text in sections 7.1 and 8.0 will be revised to reflect revisions to sampling procedures, schedule and phasing of tasks.

If you have questions or comments pertaining to this letter, please contact Jack Spicuzza at (614) 376-0960 or the undersigned at (503) 488-5282.

Sincerely,

Erik Ipsen
Partner-in-Charge

Brendan Robinson
Project Manager

DPS/BAR/ECI 0274640